

Appl. No. 10/681,203
Amdt. dated April 11, 2006
Reply to Office action of March 14, 2006

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A process according to claim 3 further comprising for filtering water to remove hardness comprising the steps of:

- ~~—— (a) flowing water to be filtered into a first opening of a module of membranes adapted to selectively reject hardness causing salts;~~
- ~~—— (b) collecting a softened permeate from a permeate side of the membranes;~~
- ~~—— (c) collecting a retentate from a second opening of the module; and,~~
- ~~—— (d) periodically reversing the direction of feed flow through the module such that water to be filtered flows into the second openingoutlet of the module and retentate flows out of the first openinginlet of the module.~~

2. (Cancelled)

3. (Original) A filtration process to remove hardness comprising the steps of;

(a) providing a membrane module comprising a plurality of successive stages and having a hardness rejection of at least 75% and an initial permeability greater than 0.1 gfd/psi;

(b) feeding feed water into the module feed inlet to flow feed water through the module in a single pass;

(c) withdrawing a retentate from the module outlet; and,

(d) withdrawing a permeate from the permeate outlet,

wherein the minimum feed/retentate velocity in any of the stages is between about 0.15 and 0.6 ft/s.

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4. (Original) The process of claim 3 wherein the minimum feed/retentate velocity in any of the stages is between about 0.2 and 0.3 ft/s.

5. (Currently Amended) A process according to claim 3 further comprising for filtering water to remove hardness comprising the steps of:

- ~~_____ (a) flowing water to be filtered against a feed or retentate side of a module adapted to selectively reject hardness-causing salts;~~
- ~~_____ (b) collecting a softened permeate from a permeate side of the membranes;~~
- ~~_____ (c) collecting a retentate from the module; and,~~
- ~~_____ (d) adding carbon dioxide to the feed water before the feed water enters the lumens of the hollow fibre membranes.~~

6. (Original) The process of claim 5 wherein the carbon dioxide is added continuously to the feed water in amounts such that the Langelier Index is zero or slightly negative.

7. (Original) The process of claim 5 wherein the carbon dioxide is added to the feed water from time to time at times when the need for permeate is low and permeate is either not produced while carbon dioxide is added to the feed or permeate produced while carbon dioxide is added to the feed is discarded.

8. (Original) The process of claim 5 further comprising periodically reversing the direction of feed flow through the module and adding carbon dioxide to the water to be filtered while the water to be filtered flows into the module in a reverse direction.

9. (Original) The process of claim 1 further comprising adding carbon dioxide to the water to be filtered while the water to be filtered flows into the module in a reverse direction.

10-13 (Cancelled)